

## Announcement and prizing



**14<sup>th</sup> International  
AVENTICS Pneumobile Competition**



# Announcement and prizing

<b>Chapter 1. General description of competition</b>	p3
1.1 Announcement for competition	p3
1.2 Definition of the Pneumobile Competition	p3
1.3 Participants of the Pneumobile Competition	p4
1.4 Planned program of Pneumobile Competition	p4
<b>Chapter 2. Official Persons</b>	p6
2.1 Steering Committee	p6
2.2 Partners, supporters	p6
2.3 Contact	p6
<b>Chapter 3. Main deadlines of competition</b>	p7
<b>Chapter 4. Application</b>	p8
<b>Chapter 5. Prizes</b>	p10



# Chapter 1.

## General description of the competition

### 1.1 Announcement for competition

Emerson is announcing 14<sup>th</sup> time a competition for designing and building pneumatic driven vehicles for university or college students.

In the frame of the competition, besides that Emerson provides elements fulfilling the modern industrial requirements, the aim of our company is to make the most developed pneumatic control technologies for the participants also available.

Official name of competition: [14<sup>th</sup> International AVENTICS Pneumobile Competition](#) (later: Pneumobile Competition)

Date of competition: [13<sup>th</sup>-15<sup>th</sup> May, 2021](#) (Thursday-Saturday)

Place of competition: [Eger, Érsekkert](#) (Hungary)

### 1.2 Definition of the Pneumobile Competition

The object of a competition is the design and construction of a “pneumatic vehicle” – **PNEUMOBILE** – which is driven by compressed air. The transmission of torque onto the wheels shall be performed by pneumatic control and drive elements. The vehicle should race on the tracks with one driver on board.

Vehicle should be designed in accordance with the rules included in General vehicle specification, [with special attention to the safety regulations](#). *New vehicles must be built with 4 wheel for 2021.* Pneumatic elements for building the vehicle will be provided for the teams by Emerson. Design documentation and the list of requested elements will be evaluated and must be accepted by jury. After acceptance of the documentation team is qualified to competition and can start building the vehicle and –in case of all KO criteria is fulfilled– the team can participate on the Pneumobile Competition 2021. KO criteria is marked obviously in the description.

# Chapter 1.

## General description of the competition

### 1.3 Participants of the Pneumobile Competition

The project is announced for universities and colleges, in normal, senior and junior category. At the 13-15<sup>th</sup> of May event, **the racing team can consist up to 6 people**, whose accommodation and meals are funded by the host company (the members of the team must be defined on the PneuReg site). Additional team members staying in the “motorhomes” can help their racing companions during the race, but all of their cost must be covered by the team. This is to help teams get junior year students involved in the work, thus ensuring a young generation. Within the representative team of 6, members can be exchanged until April 04, 2021.

All teams need to be supported by a professor or tutor of the university/college, who is the *official representative of the institution* under the preparations and the competition.

### 1.4 Planned program of the Pneumobile Competition

(changes may apply)

13<sup>th</sup> May, 2021 (Thursday)

Location: Eger, Érsekkert, Round Hall

08:00 – 12:00	Arrival of teams, registration
09:00 – 17:00	Vehicle check
14.00 – 18.00	Free practice training for teams that have successfully completed the vehicle check
18:00 – 18:30	Technical briefing and opening

Location: Emerson Automation FCP Kft. factory

14:00 – 17:00	International teacher conference (in English) and factory tour
---------------	--

Other locations:

12:00 – 14:00	Lunch at other location (self-financed)
from 14:00:	Check-in at the accommodation

14<sup>th</sup> May, 2021 (Friday)

Location: Eger, Érsekkert, Round Hall

07:00 – 08:00	Arrival
07:30 – 14:30	Evaluation by the Jury
08:00 – 15:00	Team Presentations
14:00 – 15:15	Preparation for the City Parade (change of bottles, etc.)
15:15 – 15:45	Driver briefing
15:45 – 16:00	Line up for the City Parade, start
18:00 – 20:00	Qualification race I.

Other locations:

12:00 – 14:00	Lunch at other location (self-payd)
16:00 – 18:00	City Parade in the downtown – Place: Eger, Dobó square
19:00 – 21:00	dinner at other location (self-payd)

15<sup>th</sup> May, 2021 (Saturday)

Place: Eger, Érsekkert

07:00 – 08:30	Qualification race II.
08:45 – 10:15	Long-distance race
10:30 – 12:30	Arcade races
10:30 – 11:30	Race 1
11:40 – 12:00	Race 2
12:10 – 12:30	Race 3
12:30 – 13:00	Vehicle show and other program
13:00 – 13:30	Acceleration race
13:30 – 14:00	Vehicle show and other program
14:00 – 15:00	VIP and professors' race
15:00 – 16:00	Awarding ceremony
16:00 -	Official closing of the competition

Additional programs

11:30 – 13:00	Lunch for teams and organizers in the sports hall
09:00 – 15:00	Vehicle shows, exhibitions and family programs

## Chapter 2. Official Persons

### 2.1 Steering Committee

Executive Director	GÖDRI István
Project Manager	FARKAS Rita
Technical Manager	BOLYKI Ferenc
Project organizer	SZIVÓS Judit GYÖNGY Bence JÓSVAI Tibor TUZA Ervin
Technical Supporting Manager	KÜRTHY Béla TAMAS Endre
Head of Jury	PIUKOVICS Zsolt
Jury Member	PRECUP Diana
Jury Member	STANCZAK Lukasz
Jury Member	KÓSA Ilona
Jury Member	SZABÓ László
Jury Member	VARGA Mihály

### 2.2 Partners, supporters

Safety Manager:	Assigned person of Organizing Committee
Time measurement:	ChronoMoto Kft
Event organization:	University Sportmarketing Kft

### 2.3 Contact

*Address of the Organizing Team of Pneumobile Competition:*

**During the year:** Emerson Automation FCP Kft.  
3300 Eger, Bánki Donát u. 3. (Hungary)  
E-mail: pneumobil@emerson.com  
Web: www.en.pneumobil.hu

**On the days of competition:** Competition office will be available on site.

## Chapter 3.

# Main deadlines of competition

1. Announcement for competition		01.10.2020
2. Application		31.10.2020
3. Submitting of technical documentation of vehicle		08.01.2021
4. Documentation evaluation		15.01.2021
5. Parts delivery	1 <sup>st</sup> round from	28.02.2021
	2 <sup>st</sup> round	23.03.2021
<i>For KO criteria see the Project management chapter in the Competition Rules.</i>		
6. Presenting the concept of the vehicle		30.11.2020
7. Presenting the concept of the pneumotor		15.12.2020
8. Presentation of the frame of the car (photo or video)		28.02.2021
9. Successful examination of the Competition Rules (On the PneuReg website, online)		06.04.2021
10. Finalization of the team members and T-shirt, accommodation and dining requests		07.04.2021
11. Proving that the car has been prepared and it operates well (show it in motion)		30.04.2021
12. Registration, vehicle check and show, presentation		07-08.05.2021
13. Competition Day – Races and awarding ceremony		09.05.2021



## Chapter 4. Application

We announce the competition in 3 categories. Every institute can start 3 teams in every category.

### Normal Category:

At nomination, every team member should be the student of the institute (enrolment is required). On the day of competition at least 2/3 of the team members should be the student of the university or college.

### Junior Category:

On nomination and on the day of competition, every team member should be the student of the institute (enrolment is required). At least 2/3 of the team members should be in the 1<sup>st</sup> or 2<sup>nd</sup> year of their BSc studies, and they should participate at the competition for the first time with a new vehicle. In case of rebuilding an existing vehicle, the Jury will evaluate the design documentation and take a decision about the category classification of the team (Junior or Normal).

### Senior Category:

In this category graduated students can apply (maximum 6 people), if the team members participated at minimum one of former competitions. In Emerson's 14th International AVENTICS Pneumobile Competition, [we allow the senior racers to build new vehicles](#) - for these project we supply the pneumatic and controller parts, after a personal consultation. All vehicles competing in the senior category must comply to the 2021 Competition Rules.





## The jury reserve the right not to allow the team to enter the event, if the technical documentation do not has the appropriate level.

The application has to contain the name of the **responsible team leader** (technical coach), who is a professor of the institute, as well as the data of the contact person of the team. (The contact person can be a team member.)

Application for the competition should be submitted on-line, via the following link [www.pneureg.hu](http://www.pneureg.hu) until the **31<sup>st</sup> October, 2020**. After filling all required field, teams will receive a confirmation e-mail from the organizers, containing the confirmation of the application, as well as information about the race number and about the supporting contact person from Emerson until the 11<sup>th</sup> November, 2020.

**Responsibility of the professional supporters:** supporting the team during the preparations, interpretation of the competition rules and at choice of pneumatic elements.

We kindly ask you to fill all fields with the correct data, because they will be needed during the competition (e.g. for accommodation request, invoice, etc.)

Organizers have the right to refuse the application, if the online registration sheet is not filled in correctly.

Each team that earned the right to enter to enter the 13<sup>th</sup> AVENTICS International Pneumobile competition will **automatically win the right to enter the 2021 competition** as well, under the following conditions:

- The application is uploaded to the system like described in the rulesbook
- They will participate in 2021 with their vehicle planned for the 2020 season.
- If the 2020 documentation is uploaded without change by the given deadline, the team will receive last year's scores
- There is an opportunity for these teams to update the design documentation, at which point it will be re-evaluated during the jury process

**Deadline for nomination: 31<sup>st</sup> October 2020.**

Please note, that you might modify data on the registration interface after the deadline (e.g. in case of changes regarding team members), but no new team registration will be allowed by the system. So we cannot accept any registration after closing the deadline.

## Chapter 5. Prizes

Prizes will be distributed in the following evaluation categories:

1. Technical evaluation
2. Long-distance race
3. Arcade race
4. Acceleration race
5. Project management
6. “SENIOR” category
7. “JUNIOR” category
8. “Professor of the year”
9. Records: longest run distance and highest speed (if new record is set)
10. University Championsip

The organizing company will provide a “**Pneumobile Certificate**” to all racing team members and – according to professors’ recommendation – to the supporting team members too, in which the professional and personal skills, as well as experiences obtained during the competition will be recognized.


Racing results of the “Normal” and “Junior” categories are evaluated all together.

The best team in “Project management” and the overall champion of “Senior” and “Junior” category will receive special prizes.

Based on the jury evaluation, the “Professor of the year” will also be awarded with a special prize.

In „Normal” category the first three teams of the technical evaluation, long-distance, arcade and acceleration races will be awarded with diploma, cup and money or other prizes, too.

Category 1. place	500.000 HUF
Category 2. place	other prizes
Category 3. place	other prizes



Winner of “Emerson’s Best Pneumobile 2021” will be chosen by the jury – one team out of the winners of “Normal” or “Junior” category.

The “Emerson’s Best Pneumobile 2021” will be awarded of 500.000 HUF

Besides the category winners, the organizers and/or their partners will distribute further special awards, which will be published latest on the competition day by the Organizing Committee.

Best university of the competition in 2021 will be awarded with a 1.000.000 HUF special prize. (Evaluation method is available from the competition’s home page.)

Best university of the last 3 years will be awarded with a Challenge Cup. (Evaluation method is available from the competition’s home page.)

Eger, 29<sup>th</sup> September, 2020





# Emerson's International AVENTICS Pneumobile Competition equals engineering excellence, fun and ingenuity.



Compressed-air-powered vehicles - known as “pneumobiles” - designed and created by engineering students are competing at the annual event. The vehicles, which are based on Emerson’s AVENTICS™ pneumatics components, are tested for endurance, manoeuvrability and speed. This competition further demonstrates Emerson’s long-standing commitment to STEM programs that support the future workforce, including supporting over 350 academic institutions globally.

Visit us: [Emerson.com](https://www.emerson.com)

Your local contact: [Emerson.com/contactus](https://www.emerson.com/contactus)

-  <https://en.pneumobil.hu/>
-  [Facebook.com/Pneumobil](https://www.facebook.com/Pneumobil)
-  [LinkedIn.com/company/Emerson-Automation-Solutions](https://www.linkedin.com/company/Emerson-Automation-Solutions)
-  [Twitter.com/EMR-Automation](https://twitter.com/EMR-Automation)

The Emerson logo is a trademark and service mark of Emerson Electric Co. Brand logotype are registered trademarks of one of the Emerson family of companies. All other marks are the property of their respective owners. © 2020 Emerson Electric Co. All rights reserved.



**CONSIDER IT SOLVED™**